AKULINICHEV, V.M., kandidat tekhnicheskikh nauk.

Determining the order of incoming and outgoing cars. Zhel.dor. transp. 37 no.6:75-76 Je '56. (MLRA 9:8)
(Railroads--Making up Trains)

AKULINICHEV, V.M., kand.tekhn.nauk

Method of immediate plan calculation for making up freight trains. Zhel.dor.transp. 40 no.11:31-36 N '58. (MIRA 11:12)
(Railroads--Making up trains)

AKULINICHEV, V.M., kand.tekhn.nauk, dotsent

New methods for compiling the plan for making up trains. Trudy MIIT no. 113:76-101 '59. (MIRA 14:5)
(Railroads--Making up trains)

AKULINICHEV, Y.M., kand.tekhn.nauk, dotsent

Methods of calculating the efficiency of shipper's special destination trains. Trudy MIIT no.137:96-117 '61. (MIRA 15:1)
(Railroads--Making up trains)

BUTOMA, B.Ye.; SOKOLOV, P.A.; BALAYEV, D.N.; SERGEYEV, N.M.; SHUMSKIY, K.A.; TYAPKIN, M.Ya.; SMIRNOV, V.A.; PIROGOV, N.I.; FEDOROV, N.A.; GOLYASHKIN, G.S.; KUZ'MIN, A.P.; AKULINICHEV, V.P., brigadir; GORBENKO, Ye.M.; BYSTREVSKIY, L.M., inzh.; STEPANOV, P.S., brigadir; Us, I.S., brigadir-sudosborshchik, deputat Verkhovnogo Soveta SSSR; USTINOV, P.D., slesar'-sborshchik; FINOGENOVA, N.Ya., tokar'; LERNER, M.; ALEKSEYEV, R.Ye.; SIVUKHIN, K., starshiy master; OSTAF'YEV, A.I.; TROFIMOV, B.A., inzh.; KOVRYZHKIN, V.F., inzh.; MOISEYEV, A.A. , prof.; GOLUBEV, N.V.; MOGILEVICH, V.I.; ANDRYUTIN, V.I.; ANDRIYEVSKIY, M.I.; MATSKEVICH, V.D., dots.

Shipbuilders prepare for the 21st Extraordinary Congress of the CPSU. Sudostroenie 25 no.1:1-25 Ja '59. (MIRA 12:3)

1. Predsedatel' Gosudarstvennogo komiteta Soveta Ministrov SSSR po sudostroyeniyu, ministr SSSR (for Butoma). 2. Nachal'nik upravleniya sudostroitel'noy promyshlennosti Lensovnarkhoza (for Sokolov). 3. Direktor Baltiyskogo sudostroitel'nogo zavoda im. S.Ordzhonikidze (for Balayev). 4. Nachal'niki tsekhov Baltiyskogo sudostroitel'nogo zavoda im. S. Ordzhonikidze (for Sergeyev, Shumskiy). 5. Nachal'nik mekhanicheskogo tsekha Baltiyskogo sudostroitel'nogo zavoda im. S. Ordzhonikidze (for Tyapkin). (Continued on next card)

BUTOMA, B.Ye.---(continued) Card 2.

6. Brigada kommunisticheskogo truda Baltiyskogo sudostroitel'nogo zavoda im. S. Ordzhonikidze (for Smirnov). 7. Glavnyy inzhener Admiralteyskogo sudostroitel'nogo zavoda, Leningrad (for Pirogov). 8. Glavnyy inzhener sudostroitel'nogo zavoda im. A.A. Zhdanova (for Fedorov). 9. Nachal'nik elektrodnogo tsekha Sudostroitel'nogo zavoda im. A.A. Zhdanova (for Golyashkin). 10. Nachal'nik tsekha kommunisticheskogo truda sudostroitel'nogo zavoda im. A.A. Zhdanova (for Kuz'min). 11. Malyarnyy tsekh sudostroitel'nogo zavoda im. A.A. Zhdanova (for Akulinichev). 12. Glavnyy inzhener Nikolayevskogo sudostroitel'nogo zavoda im. I.I. Nosenko (for Gorbenko). 13. Nikolayevskiy sudostroitel'nyy zavod im. I.I. Nosenko (for Bystrevskiy, Us, Ustinov, Finogenova). 14. Slesarno-sborochnaya brigada Nikolayevskogo sudostroitel'nogo zavoda im. I.I. Nosenko (for Stepanov). 15. Zamestitel'nachal'nika konstruktorskogo byuro sudostroitel'nogo zavoda "Krasnoye Sormovo" (for Lerner). 16. Glavnyy konstruktor konstruktorskogo byuro sudostoritel'nogo zavoda "Krasnoye Sormovo" (for Alekseyev). 17. Sudostroitel'nyy zavod "Krasnoye Sormovo" (for Sivukhin). 18. Direktor sudostroitel'nogo zavod "Leninskaya kuznitsa" (for Ostaf'yev). 19. Sekretar' partkoma TSentral'nogo nauchno-issledovatel'skogo instituta (for Trofimov). (Continued on next card)

BUTOMA, B.Ye.--(continued) Card 3.
20. Predsedatel' Leningradskogo oblastnogo pravleniya Nauchno-tekhnicheskogo otdela sudostroitel'noy promyshlennosti (for Moiseyev). 21. Glavnyye inzhenery Konstruktorskogo byuro (for Golubev, Andryutin). 22. Glavnyy konstruktor Konstruktorskogo byuro (for Mogilevich). 23. Nachal'nik TSentral'nogo tekhniko-konstruktorskogo byuro (for Andriyevskiy). 24. Zamestitel' direktora Leningradskogo korablestroitel'nogo instituta po uchebnoy chasti (for Matskevich).
(Shipbuilding)

MINKEVICH, A.N., kand.tekhn.nauk; Prinimali uchastiye: ANDRYUSHECHKIN, V.I.; AKULINICHEV, Ye.V.; SHUR, N.F.

Boride diffusion layers on metals. Metalloved. i term. obr. met. no.8:9-15 Ag '61. (MIRA 14:8)

(Case hardening) (Borides)

TYSHLYAR, I.S.; AKULINCHEVA, G.V.; MAKOVETSKIY, O.Ye.; KLYUSHNIKOV, V.I.

Gas equipment of a kiln for ceramic tiles. Gaz. prom. 10 no.7:34-35 '65. (MIRA.18:8)

AKULINICHEVA, I.T.

Apparatus for control of the authenticity of the electrocardiogram. Klin.med.,Moskva 18 no.10:64-67 Oct 50. (CIML 20:4)

1. Saki.

AKULINICHEVA, M. L. Cand Agr Sci -- "Study of the process of milking cows in the operation of various milking machines. Mos, 1961 (Mos Order of Lenin Agr Acad im K. A. Timiryazev). (KL, 4-61, 203)

AKULININ, A.A., aspirant.

Corn silage and potatoes in sheep rations. Nauka i pered. op. v sel'khoz. 7 no.5:19-21 My '57. (MLRA 10:6)

1. Omskiy veterinarnyy institut.
(Sheep-feeding and feeding stuffs)
(Corn (Maize)) (Potatoes)

COUNTRY : USSR
CATEGORY : Farm Animals.
The Swine.
ABS. JOUR. : RZhBiol., No. 3, 1959, No. 12040

AUTHOR : Gavrilov, A. I.; Akulinin, A. A.; Zhakov, M.S.
INST. : Vitebsk Institute of Veterinary Science.
TITLE : The Sympathetic Nerves of the Gastro-Intestinal Tract in the Pig (Experimental Morphological Investigation).
ORIG. PUB. : Uch. zap. Vitebskogo vet. in-ta, 1957, 15, 173-177
ABSTRACT : It was demonstrated on 64 carcasses of pigs 3 months to 2 years old and experimentally on 6 piglets 1-2 months old that the sympathetic nerve trunks leading from the splanchnic and cranial mesenteric gangliaare the basic nerve ducts affluent to the gastro-intestinal tract (GIT). Experiments in which these ganglia were removed and visceral nerves were severed, testify to the fact that the fibers which flow from the ganglia innervate all sectors of GIT. Seventy-two hours after the operation,

Card: 1/2

COUNTRY : USSR
CATEGORY : Farm Animals. Q
The Swine.
ABS. JOUR. : RZhBiol., No. 3, 1959, No. 12044

AUTHOR : Akulinin, A. A.; Kovalev, N. A.; Surma, V. V.
INST. : Vitebsk Institute of Veterinary Science.
TITLE : The Blood Supply of Cranial Cervical Sympathetic Ganglia in the Pig.

ORIG. PUB. : Uch. zap. Vitebskogo vet. in-ta, 1957, 15, 268-272

ABSTRACT : It was shown on 7 carcasses of piglets 2-4 months old by using methods of infusing the vessels, as well as preparations and roentgenography that the cranial cervical sympathetic ganglia (CCSG) blood supply divides into branches which form anastomoses between themselves. The blood supply of the right CCSG proceeds from the external and internal carotid, the occipital-carotid and the superficial temporal arteries. The left CCSG is supplied by the branches of the ex-

Card: 1/2

AKULININ, A.A., Cand Bio Sci -- (diss) "Effect of silage and potatoes on the gastro-intestinal secretion and productivity of fine-wool sheep." Omsk, 1958, 11 pp. (Omsk State Vet Inst of Min of Agr USSR) 150 copies (KL, 39-58, 108)

AKULININ, A. A.

37459. Sheynyy otdel simpaticheskoy nervnoy sistemy sobaki. Uchen. zapiski viteb. vet. in-ta, t. IX, 1949, s. 50-56.--Bibliogr: 19 nazv.

SO: Letopis' Zhurnal'nykh Statey, Vol. 7, 1949

AKULININ, A.A.

Structure of the sacral portion of the marginal sympathetic trunk in dog. Arkh. anat. gist. i embr. 31 no.4:33-38 O-D '54. (MLRA 8:2)

1. Iz kafedry normal'noy anatomii domashnikh zhivotnykh (i.o. zav. dotsent A.A.Akulinin) Vitebskogo veterinarnogo instituta.
(SYMPATHETIC NERVOUS SYSTEM, anatomy and histology, sacral portion of marginal sympathetic trunk in dog)

AKULININ, A. A. Doc Biol Sci -- (diss) "Morphology of the solar plexus, its ganglions, and rami in the abdominal and pelvic organs of dogs and hogs." Vitebsk, 1957. 25 pp (Min of Agriculture USSR. Len Vet Inst). (KL, 11-58, 114)

AKULININ, A.A.

GAVRILOV, A.I., (BSSR, g.Vitebsk, ul. Chekhova, d.4, kv.2), AKULININ, A.A. ZHAKOV, M.S.

Sympathetic nerves of the gastrointestinal system in swine. Arkh.anat., gist. i embr. 35 no.5:108-110 S-O '58 (MIRA 11:12)

1. Kafedra normal'noy anatomii (zav. - dots. A.A. Akulinin) i kafedra patologicheskoy anatomii (zav. - prof. A.I. Gavrilov) Vitebskogo veterinarnogo instituta.

(GASTROINTESTINAL SYSTEM, innervation,
sympathetic nerves in swine (Rus))
(SYMPATHETIC NERVOUS SYSTE, anat. & histol.
gastrointestinal innervation in swine (Rus))
(SWINE,
sympathetic gastrointestinal innervation (Rus))

AKULININ, A.I.

AID P - 280

Subject : USSR/Engineering

Card : 1/1

Author : Akulinin, A. I.

Title : Experiment on thermo-acid treatment of oil wells of the trust "Chernomorneft'"

Periodical : Neft. Khoz., v. 32, #4, 31-32, Ap 1954

Abstract : Thermochemical treatment of an oil stratum cluged with parafinic and tarry substances is described. The treatment consists of the thermochemical reaction between metallic cuttings of magnesium and 15% solution of hydrochloric acid, 40% hydroflouric acid, 2% acetic acid, catalyzer (NChK) and fuel oil. As a result of this treatment the output of the oil well increased 100-700%. One table.

Institution : Trust Chernomorneft' and Krasnodar Branch of the All-Union Scientific Research Institute

Submitted : No date

AKULININ, A. N.

AKULININ, A. N. -- "The Structure, Growth, and Productivity of Pine Plantations in the Tatar ASSR and Foundations of the Economy in Them," Min Higher Education USSR. Voronezh Inst. Voronezh, 1955. (Dissertation for the Degree of Candidate in Agricultural Sciences).

SO: Knizhnaya Letopis', No 9, 1956

KOYRE, V.; NADTOCHENKO, A.; AKULININ, I.

Brigades for promoting technological development. NTO no.10:39 O '59. (MIRA 13:2)

1.Novo-Kramatorskiy mashinostroitel'nyy zavod im. I.V. Stalina. 2.Zamestitel' predsedatelya soveta pervichnoy organizatsii Nauchno-tekhnicheskogo obshchestva g.Kramatorsk (for Koyre). 3.Predsedatel' komissii sodeystviya tekhnicheskomu progressu g.Kramatorsk (for Nadtochenko). 4.Predsedatel' byuro metallurgicheskoy sektsii Nauchno-tekhnicheskogo obshchestva, g.Kramatorsk (for Akulinin).
(Kramatorsk--Machinery industry)

AKULININ, I.A.

Oil from Hippophe ruhamnoides in therapy of burns. Sov.med. 22 no.11:137-138 N '58 (MIRA 11:11)

1. Glavnyy vrach Chigol'skoy raryonnoy bol'nitsy Voronezhskoy oblasti.

(BURNS, ther.
Hippophe ruhamnoides oil in combined ther. (Rus))
(OILS, ther. use
Hippophe ruhamnoides oil in combined burn ther. (Rus))

AKULININ, I.A., zasluzhennyy vrach RSFSR

Work experience of a district rural hospital. Sov.med. 26 no.8: 145-147 Ag '62. (MIRA 15:10)

1. Iz Chigol'skoy uchastkovoy bol'nitsy (glavnyy vrach I.A.Akulinin) Talovskogo rayona Voronezhskoy oblasti.
(TALOVAYA DISTRICT (VORONEZH PROVINCE)--MEDICINE, RURAL)

Akulinin, M.A.

135-8-9/19

SUBJECT: USSR/Welding

AUTHORS: Ivanov, F.I., Engineer, and Akulinin, M.A., Engineer.

TITLE: Experience in Ultrasonic Inspection of Electric Slag-Welded Joints (Opyt ultrazvukovogo kontrolya svarnykh shvov, vypolnennykh elektroshlakovoy svarkoy).

PERIODICAL: "Svarochnoye Proizvodstvo", 1957, # 8, pp 25-27 (USSR)

ABSTRACT: The article describes in detail the inspection method using the defectoscope "УЗД-7Н", developed by TsNIITMASH in collaboration with the Novo-Kramatorsk Machinebuilding Plant which is now in use at this plant.

The "УЗД-7Н" ultrasonic defectoscope, working on 1.8 Mc/s, comprises prismatic detectors, by which the ultrasonic waves are sent through the metal at an angle to the surface. The measured length of a defect exceeds the actual extension, since the waves are diverging. The actual location and extension of a defect are determined by the depth meter and a scale on the instrument, with subsequent calculation by formulas (given in the article). The method is applicable for straight and circular seams. The precision is within 1-10% and is independent of the size or

Card 1/3

TITLE: Experience in Ultrasonic Inspection of Electric Slag-Welded Joints (Opyt ultrazvukovogo kontrolya svarnykh shvov, vypolnennykh elektroshlakovoy svarkoy).

location of the defect, but is adjusted by the instrument setting prior to inspection.
The disadvantage of the method is the impossibility of three-dimensional measuring of defects and of measuring the size of single defects in case of defect accumulations.

Since cracks in electric slag welds are always located lengthwise and in the middle of the seam, all so located defects are assumed to be cracks. Defects at the border with base metal can only be non-fusion voids. Defects scattered all over the seam are slag inclusions or gas pores which cannot be distinguished from each other.

The temporary technical specifications for welded beds and cylinders of hydraulic presses reject welds containing cracks or non-fusion areas and require re-welding and re-inspecting of defective spots. Permissible defects are not more than 3 single slag inclusions in 1 meter of seams, spaced not less than 30 mm apart, and not exceeding 10 mm diameter.

Card 2/3 Subject inspection method was applied for welded bedplates,

IVANOV, F.I.; AKULININ, M.A.

Measuring internal defects of metals by the ultrasonic method. Zav. lab. 23 no.3:309-311 '57. (MLRA 10:6)

1. Novo-Kramatorskiy mashinostroitel'nyy zavod.
(Ultrasonic testing) (Metals--Testing)

S/137/62/000/005/121/150
A160/A101

AUTHORS: Kharchenko, V. A., Gurzhiyenko, K. F., Kondrashov, A. I., Akulinin, M. A.

TITLE: The effect of thermal treatment conditions of forge-heated forgings on the formation and coloring of flakes

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 5, 1962, 126, abstract 5I769 ("Tr. Donetsk. politekhn. in-ta", 1961, 56, 41 - 53)

TEXT: The investigation of the effect of the process of cooling forged pieces and of the subsequent tempering on the formation of flakes and their coloring was carried out with 34 XH3M (34KhNZM) steel composed of 0.35% C, 0.57% Mn, 0.26% Si, 0.90% Cr, 3.12% Ni, 0.31% Mo, 0.018% S, 0.020% P, and containing 6.0 cm^3 of H per 100 g during the teeming. The ingot, having a temperature of 700°C and delivered to the forge and press shop, was charged, within two hours, into the furnace with a temperature of 650°C for 6 hours. Then, it was charged into the soaking pit with a temperature of 950°C for 35 hours, and ultimately it was removed with 1,200°C for billeting. After this process, it was

Card 1/ 2

again charged into the furnace with 1,050°C for 17 hours and then taken out for forging. The forging was conducted at 1,200 - 950°C. After the forging, the samples were subjected to various stages of treatment: 1) they were cooled in the air, 2) cooled down to 100°C, and 3) quenched in oil. Immediately after the cooling, one part of the samples was tempered at 650°C for 5 hours; one part was tempered after aging at room temperature for two weeks; and one part remained untempered. The kinetics of the formation of flakes during the process of the hold time at room temperature for 2 to 15 days was investigated by the ultrasonic method. Investigated were also the macrostructure and the flakes with the help of a magnetic flaw detector after an aging process of 1 month. It was revealed that the quantity and the zone of the location of flakes increase in case the cooling rate is increased. The dimensions of the flakes, however, decrease if the cooling rate is raised. An immediate high tempering prevents the formation of flakes. The aging of samples in the air up to the tempering for two weeks, contributes to increase the amount and sizes of flakes. A bright silverish coloring of the flakes in their cross-sectional view is obtained only in the samples subjected to high tempering, as a result of an increase in the plasticity and toughness of the metal. There are 8 references.
[Abstracter's note: Complete translation]

A. Babayeva

L 35339-66 EWT(m)/EWP(w)/T/EWP(t)/ETI/EWP(k) IJP(c) JD 4

ACC NR: AP6011826 (N) SOURCE CODE: UR/0383/66/000/002/0035/0039 40 B

AUTHOR: Faybisovich, L. I.; Varakin, N. I.; Larichkin, M. S.; Medovar, B. I.; Latash, Yu. V.; Yemel'yanenko, Yu. G.; Maksimov, I. P.; Koval', S. I.; Akulinin, M. A

ORG: none

TITLE: Quality of heavy forgings of 36KhN1MFAR electroslag rotor steel

SOURCE: Metallurgicheskaya i gornorudnaya promyshlennost', no. 2, 1966, 35-39

TOPIC TAGS: steel forging, steel, nonmetallic inclusion, brittleness, temper brittleness

ABSTRACT: The study deals with the effect of electroslag melting on the quality of vacuum-degassed and nondegassed open-hearth steel. Forgings of 36KhN1MFAR steel, obtained from electroslag ingots weighing 13 tons, have a compact structure and a homogeneous chemical composition. The content of sulfur, gas, and nonmetallic inclusions in them is considerably lower than in similar forgings from metal made the conventional way. The mechanical properties of the remelt metal are characterized by high stable values in the length and cross section of the forging both in longitudinal and diametrical directions. Electroslag melted 36KhN1MFAR steel does not possess a tendency to temper brittleness. Its nul ductility transition temperature is below -70C. Orig. art. has: 5 figures and 4 tables. [NT]

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 003

Card 1/1 UDC: 669-13:658.562

L 08982-67 EWT(m)/EWP(w)/EWP(t)/ETI IJP(c) JD

ACC NR: AP5029654 (A) SOURCE CODE: UR/0182/66/000/008/0038/0040

AUTHOR: Braun, M. P.; Mar'yushkin, L. G.; Akulinin, M. A. 42 39

ORG: none

TITLE: Effect of heating temperature on the plasticity, structure and mechanical properties of high-chromium Kh17N2 steel

SOURCE: Kuznechno-shtampovochnoye proizvodstvo, no. 8, 1966, 38-40

TOPIC TAGS: high chromium steel, metal forging, plasticity, mechanical property, high temperature effect / Kh17N2 high-chromium steel

ABSTRACT: This mark of steel(~0.15% C, ~0.24% Si, ~0.52% Mn, ~16.43% Cr, ~1.78% Ni, ~0.023% P, ~0.016% Si) is widely used in the fabrication of work parts performing in a humid environment at temperatures of up to 300-400°C. Its high corrosion resistance is combined with satisfactory mechanical properties. Since it proved impossible to produce satisfactory production of forgings from large ingots of this steel at temperatures of 1150-800°C, the authors explored the possibilities for improving their quality by investigating the plasticity of this steel at elevated temperatures and the attendant change in structure and mechanical properties.

Card 1/3

UDC: 621.78.01.7

Plasticity was studied by upsetting cylindrical specimens of this steel at temperatures of 1270 to 780°C, once through every 50°C, on chromium-plating their surfaces to avoid scaling. The findings were used to plot the plasticity curve of Kh17N2 steel (Fig. 1), which proved to be of a

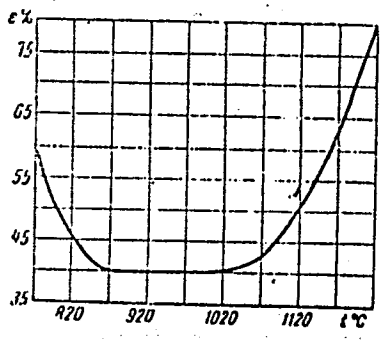


Fig. 1. Plasticity diagram of forged Kh17N2 steel

parabolic character, decreasing at from 870 to 1020°C and increasing at higher or lower temperatures. The critical degree of deformation ε at 780° C is 60%; at 870-1020°C, 40%; and at 1220°C, 80%. As the temperature is further increased to 1250-1270°C, ε becomes virtually absent. Accordingly, the specimens forged at 1250°C displayed satisfactory plasticity. This

was followed by investigation of mechanical properties of the forgings. It was found that ingots forged at 1270°C displayed a higher malleability than those forged at 1150°C; the plasticity of the metal was quite satisfactory, whereas the ingot forged at 1150°C displayed a large number of cracks. Furthermore, the ingots forged at the higher temperature (1270°C) displayed higher yield point and relative elongation. On the other hand, their tensile strength and impact strength were the same as those of the ingots forged at the lower temperature. Examination of the microstructure of the upset specimens showed that in every case it consists of δ-ferrite and martensite or products of its decomposition, with the amount of δ-ferrite increasing with temperature, (75-80% at 1270°C against 25-30% at 800-850°C). It was further established that the structure of ingots of Kh17N2 steel containing more than 50% δ-ferrite after forging can be corrected by means of an appropriate heat treatment, namely, by quenching in oil from 1000°C and tempering at 600°C for 5 hr; the resulting microstructure is that of fine-disperse sorbite containing only 5-10% δ-ferrite, so that the danger of excessive plasticity of the metal is averted. Orig. art. has: 6 figures, 1 table.

SUB CODE: 13, 11/ SUBM DATE: none

AKULININ, N.

Akulinin, N. ; Iachenko, V.; Pozhidaev, A.

"New Methods In Constructing And Heating Hotbeds. Tr. From The Russian." p. 1418. (Za Socialisticke Zemedlstvi. Vol. 3, No. 12, Dec. 1953, Praha.)

SO: Monthly List of East European Accessions,/Library of Congress, March 1954, Uncl. Vol. 3, No. 3.

AKULININ, N. D.

Agricultural Machinery

For general mechanization in feed production, Korm. baza 4, No. 3, 1953.

9. Monthly List of Russian Accessions, Library of Congress, June 1953, Uncl.

1. AKULININ, N. D.

2. USSR (600)

4. Vegetable Gardening--Mytishchi District

7. Growing vegetable crops in the jurisdiction of the Mytishchi Machine-Tractor Station, Dost. sel'khoz., No. 4, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April, 1953, Uncl.

AKULININ, N.D.

(Mekhanizatsiia proizvodstva kartofelia... 1954.)

1. Farm mechanization - Russia. 2. Potatoes - Russia. 3. Vegetable gardening - Russia.

AKULININ, N.V

Podmoskovnoi MTS (Machine-tractor station in the Moscow area). Moskva, Profizdat, 1953. 54 p.

SO: Monthly List of Russian Accessions, Vol 7, No. 8, Nov. 1954

AKULININ, T.Ye.; SUMAROKOV, S.B. (Saratov)

Analysis of postoperative mortality in acute appendicitis. Klin. med. 32 no.11:69 N '54. (MLRA 8:1)

1. Iz kliniki gospital'noy khirurgii (dir.-prof. A.N.Spiridonov) Saratovskogo meditsinskogo instituta.
(APPENDICITIS, surgery
postop. mortal.)

AKULININ, T.Ye.
13/12/57

AKULININ, V.I.

Disease incidence with temporary lossof working capacity among workers of some machine-tractor stations in Kursk Province. Sbor. trud. Kursk. gos. med. inst. no.13:50-53 '58. (MIRA 14:3)

1. Iz kafedry organizatsii zdravookhraneniya (zav. - dotsent A.G. Kurochkina) Kurskogo gosudarstvennogo meditsinskogo instituta i Kurskoy oblastvnoy sanitarno-epidemiologicheskoy stantsii (glavnyy vrach - V.I.Latanov).
(KURSK PROVINCE--MACHINE-TRACTOR STATIONS--HYGIENIC ASPECTS)

AKULININ, V.I., vrach

Sanitary conditions at repair shops of region and supply stations in the Kursk Province. Gig. i san. 24 no.5:55-56 My '59. (MIRA 12:7)

1. Iz Kurskoy oblastnoy sanitarno-epidemiologicheskoy stantsii.
(INDUSTRIAL HYGIENE,
in tractor repair shops (Rus))

AKULININ, V.I., sanitarnyy vrach

Concerning Professor V.S. Serebrennikov's article "On the development of hygiene and sanitation." Gig.i san. 25 no.2:84-85 F '60. (MIRA 13:6)

1. Iz Kurskoy oblastnoy sanitarno-epidemiologicheskoy stantsii.
(KURSK PROVINCE--PUBLIC HEALTH)

AKULININ, V.I., aspirant

Incidence of disease and a temporary loss of the working capacity of workers in hemp plants. Sbor. trud. Kursk. gos. med. inst. no. 16:44-47 '62. (MIRA 17:9)

1. Iz kafedry gigiyeny (zav. - prof. A.V. Rudchenko) Kurskogo gosudarstvennogo meditsinskogo instituta.

AKULININ, V.S.; ADAMCHUK, G.P.; SVIRSHCHEVSKIY, Yu.I.

The DE-PMDS-60 dredger without moorings. Biul. tekh.-ekon. inform. no. 4:61-63 '61. (MIRA 14:5)
(Dredging machinery)

NESTEROV, A.I., prof.; SACHKOV, V.I., kand.med.nauk; AKULININA, E.Ya.
(Moskva)

Rheumatology in England. Vop.revm. 1 no.2:70-80 Ap-Je '61.
(MIRA 16:4)

1. Deystvitel'nyy chlen AMN SSSR (for Nesterov).
(GREAT BRITAIN--RHEUMATIC FEVER)

AKULISHNIN, F., Geroy Sovetskogo Soyuza, gvardii polkovnik.

The unit's anniversary. Voen.-inzh. zhur. 101 no.5:35-37 My '57.
(Military engineering) (MIRA 10:6)

AKULISHNIN, F., polkovnik, Geroy Sovetskogo Soyuza

Preparation by engineers of the route of march of a tank battalion. Voen. vest. 42 no.5:39-42 My '63. (MIRA 16:5)
(Military engineering) (Tank warfare)

Akulkina, L.M.

USSR/Thermodynamics. Thermochemistry. Equilibria. Physico-Chemical Analysis. Phase Transitions. B-8

Abs Jour : Ref Zhur - Khimiya, No 8, 1957, 26145

Author : V.Ye. Plyuchchev, L.N. Komissarova, L.V. Meshchaninova, L.M. Akulkina.

Title : Study of Interaction of Chlorides of Alkali and Alkali Earth Metals in Melts. III. Study of Interaction of Sodium, Potassium Calcium, Cesium, Rubidium and Lythium Chlorides in Melts.

Orig Pub : Zh. neorgan. khimii, 1956, 1, No 4, 820-833; corrections in No 12, 2874

Abstract : The ternary systems LiCl - Na Cl - $CaCl_2$(I), KCl - RbCl - $CaCl_2$ (II) and KCl - CsCl - $CaCl_2$ (III) were studied by the visual-polythermal method and the isoterms of the liquidus surfaces of the systems were plotted. The existence of two regions of primary crystallization of $CaCl_2$ and solid solutions of LiCl and NaCl was established in 1. It is shown that II is of the zonal type. The system has 3 crystallization fields: of $CaCl_2$, of a solid solution of KCl and RbCl,

Card : 1/2

SLOTVINSKIY-SIDAK, N.P.; FEDOROV, P.I.; AKULKINA, L.M.; LOVETSKAYA, G.A.; SITDYKOVA, N.S.

Production of pure vanadium pentoxide from process solutions. Zhur. prikl. khim. 36 no.11:2367-2372 N '63. (MIRA 17:1)

BGATOV, V.I.; AKUL'SHINA, Ya.P.; BUDNIKOV, V.I.; GERASIMOV, Ye.K.; GUROVA, T.I.; KAZANSKIY, Yu.P.; KAZARINOV, V.P.; KONTOROVICH, A.E.; KOSOLOBOV, N.I.; LIZALEK, N.A.; MATUKHIN, R.G.; MATUKHINA, V.G.; PETRAKOV, V.U.; RODIN, R.S.; SAVITSKIY, V.Ye.; SHISHKIN, B.B.; GRIN, Ye.P., tekhn. red.

[Lithoformational analysis of sedimentary rocks] Litologo-formatsionnyi analiz osadochnykh tolshch. Pod red. V.I. Bgatova i V.P.Kazarinova). (MIRA 16:7)

1. Sibirskiy nauchno-issledovatel'skiy institutu geologii, geofiziki i mineral'nogo syr'ya.
(Rocks, Sedimentary--Analysis)

BOL'SHAKOV, K.A.; FEDOROV, P.I.; STEPINA, S.B.; AKULKINA, L.M.; SHAKHOVA, M.N.

Preparation of anhydrous strontium and barium iodides and study of their interaction in molten state. Zhur.neorg.khim. 7 no.3:605-608 Mr '62. (MIRA 15:3)
(Strontium iodide) (Barium iodide)

S/078/63/008/001/026/026
B117/B108

AUTHORS: Fedorov, P. I., Akulkina, L. M., Razgon, Ye. S.

TITLE: Solubility in the system NH_4VO_3 - NH_4Cl - H_2O at 25°C

PERIODICAL: Zhurnal neorganicheskoy khimii, v. 8, no. 1, 1963, 258-260

TEXT: The solubility in the system mentioned was determined at 25 ± 0.1°C by addition of NH_4Cl. The initial salts were recrystallized and dried at room temperature. After adding ammonium chloride to the saturated ammonium metavanadate solution, the equilibrium in the system was established within 7 days. The crystallization field of ammonium metavanadate in the system was found by simultaneous determination of the compositions of the solid phase and of the saturated solutions corresponding to them. The NH_4VO_3 content decreases rapidly with increasing NH_4Cl concentration. With 20% NH_4Cl, the NH_4VO_3 is almost completely salted out of the solution. The eutonic point corresponds to 28.8% NH_4Cl. There are 2 figures and 1 table.

Card 1/2

Solubility in the system ...

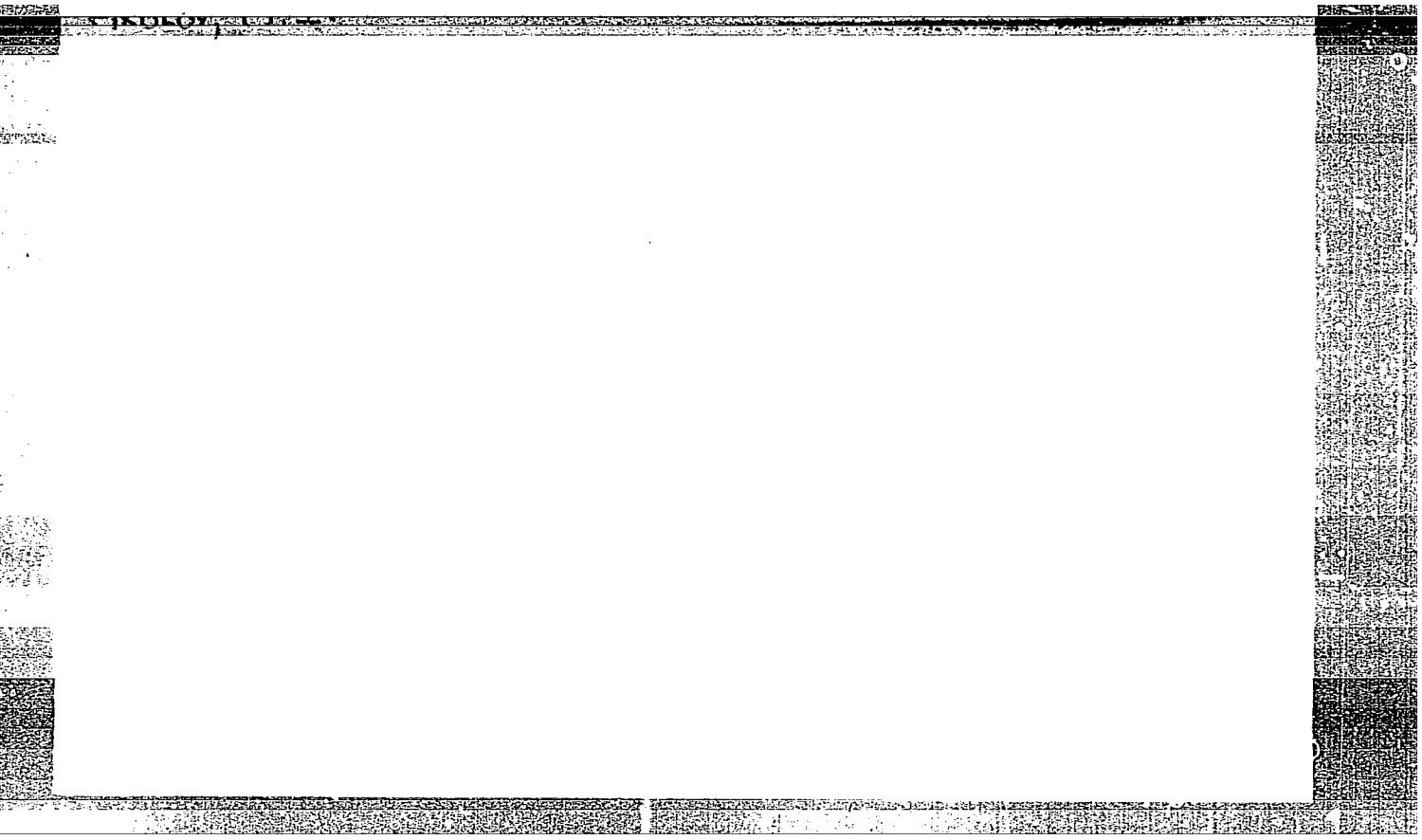
S/078/63/008/001/026/026
B117/B108

SUBMITTED: April 23, 1962

Card 2/2

FEDOROV, P.I.; AKULKINA, L.M.; RAZGON, Ye.S.

Solubility in the system NH_4VO_3 - NH_4Cl - H_2O at 25°C.
Zhur.neorg.khim. 8 no.1:258-260 Ja '63. (MIRA 16:5)
(Ammonium vanadates) (Ammonium chloride) (Solubility)



APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720016-4"

AKULOV, A.I.

Some metallurgical problems of semiautomatic welding of stainless steel with the use of unfused silicon fluxes. Avtom. svar. 7 no.3:50-54 My-Je '54. (MLRA 7:7)

1. Moskovskoye vysshoye tekhnicheskoye uchilishche.
(Steel, Stainless--Welding)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720016-4"

LAZAREV, Anatoliy Yakovlevich; AKULOV, A.I., redaktor; NEDZYNSKAYA, A.A. tekhnicheskiy redaktor.

[Gas and electric welder] Gazoelektrosvarshchik. Moskva, Ugletekhnizdat, 1955. 115 p. (MLRA 8:8)
(Welding)

ZHELEZNYAK, Dmitriy Mitrofanovich; AKULOV, A.I., kandidat tekhnicheskikh nauk, nauchnyy redaktor; KRIUGER, Yu.V., redaktor izdatel'stva; MEDVEDEV, L.Ya., tekhnicheskiy redaktor

[Electrodes with steel powder in their coating] Elektrody so stal'nym poroshkom v pokrytii. Moskva, Gos. izd-vo lit-ry po stroitel'stvu i arkhitekture, 1956. 55 p. (MLRA 9:9)
(Electrodes) (Electric welding)

AKULOV, A.I.

AID P - 5068

Subject : USSR/Engineering-Welding

Card 1/1 Pub, 107-a - 8/11

Authors : Akulov, A. I. and Yu. Pal'chuk

Title : Automatic argon-arc welding with melting electrodes of stainless steel in different positions.

Periodical : Svar. proizv., 6, 27-29, Je 1956

Abstract : The authors report the test results of automatic argon-arc welding of the 1Kh18N9T stainless steel of 2 to 5 mm thick in any position. They used the OKh18N9 and OKh18N9T electrodes of 0.8 and 1.0 mm and pure argon of the "second composition" (according to the Technical Specifications of the Ministry of Chemical Industry (TU MKhP); a 160 amp current was used. Three tables, 2 drawings, 1 photo; GOST standards.

Institution : Moscow Higher Technical School (MVTU) im Bauman.

Submitted : No date

AKULOV, A. I.

AID P - 4507

Subject : USSR/Engineering

Card 1/1 Pub. 11 - 5/12

Authors : Pal'chuk, N. Yu. and A. I. Akulov

Title : Automatic Welding of Non-turning Stainless Steel Pipes

Periodical : Avtom. svar., 9, 2, 27-34, Mr/Ap 1956

Abstract : The authors describe the technique and equipment used in automatic argon arc welding of 1Kh18N9T stainless steel pipes 57, 63, 76 and 89 mm in diameter, while in the stationary (non-turnable) position prevalent in various piping systems. The installation is illustrated, the details of handling and finishing of the process, and the results of tests of welded tubing are given. Three tables, 3 photos and 3 drawings.

Institution : Moscow Higher Technical School (MVTU) im. Bauman

Submitted : O 17, 1955

Akulov A. I.

137-58-3-5265

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 3, p 115 (USSR)

AUTHORS: Pal'chuk, N. Yu., Akulov, A. I.

TITLE: Automatic Argon-shielded Consumable-electrode Inert Arc Welding of Steels of the 18-8 Type (Avtomaticheskaya argono-dugovaya svarka plavyashchimsya elektrodom staley tipa 18-8)

PERIODICAL: V sb.: Prochnost' i avtomatizatsiya svarki. (MVTU, 71). Moscow, Mashgiz, 1957, pp 93-104

ABSTRACT: An investigation was carried out to evaluate the quality of welded joints of steel of 18-8 type which were fabricated by means of an automatic Ar-shielded consumable-electrode arc-welding process. The chemical compositon of metal in the seam showed that the coefficient of assimilation of C, Cr, Ni, Si, Mn, Nb, and Mo closely approaches the value of 1, while the coefficient of assimilation of Ti amounts to 0.7-0.8. The mechanical properties of welded joints of steels of 18-8 type (executed in any position in space), as well as of rigid pipe junctions, are quite satisfactory and meet the requirements for welded connections of such steels. Welded junctions of 12mm thick 1Kh18N9T steel, executed with welding rods of Kh18N9T type,

Card 1/2

Automatic Argon-shielded Consumable-electrode (cont.)

exhibit an ak of 11.1-12.7 kg/cm^2. The macro-and microstructure of the welds is independent of their position in space during welding, and is only slightly affected by the type of welding rod employed (compared with 0Kh18N9, the Kh18N9T welding rod produces a finer weld structure). The resistance of butt welds to intercrystalline and overall corrosion is quite satisfactory and is virtually unaffected by stabilization and stress-relieving processes after the welding operations.

G.N.

AKULOV, A.I.

AUTHOR: Akulov, A.I., Candidate of Technical Sciences 135-10-8/19

TITLE: Automatic Welding of Nonrotatable Joints of Low-Carbon Steel Pipes in Carbon Dioxide Medium (Avtomaticheskaya svarka nepovorotnykh stykov malouglerodistykh trub v srede uglekislogo gaza)

PERIODICAL: Svarochnoye Proizvodstvo, 1957, No 10, pp 25-29 (USSR)

ABSTRACT: The method and technology of automatic welding of nonrotatable joints of low-carbon steel pipes in carbon dioxide medium (Reference 5) were developed at TsNIITMASh. The behavior of liquid metal during arc welding on the top, bottom and sides of a joint on rigidly mounted pipes (which cannot be rotated) is discussed. Oscillograms show the variations of values of current intensity and arc voltage during welding of such joints with the use of a rigid-characteristic generator (converted generator "ПС-500"), of a dropping-characteristic generator "СУГ-2р" and when welding in carbon dioxide as shielding gas. The influence of gravity, arc pressure, and surface tension of liquid metal is analyzed. The welding technology under consideration was worked out by using a special welding device (Figure 4) with a welding head moving around the joint in two semi-circles (Figure 3). The article includes the character-

Card 1/2

Akulov, A. I.

135-12-15/17

AUTHOR: Akulov, A.I., Pal'chuk, N.Yu., Candidates of Technical Sciences

TITLE: Semiautomatic Gas-arc Welder for Thin-sheet Metal (Svarochnyy poluavtomat dlya gazodugovoy svarki tonkolistovogo metalla)

PERIODICAL: Svarochnoye Proizvodstvo, 1957, # 12, p 44-45 (USSR)

ABSTRACT: The article gives a detailed description of a new semi-automatic arc welding device for welding in shielding gases, devised by the MVTU imeni Bauman. The device, which is illustrated by 2 photographs (Figure 1) and an electrical circuit diagram (Figure 2), consists of a welding pistol and a control board in a cabinet. All work parts including the feed mechanism are placed in the pistol. The feed cable and shielding gas are led through one flexible hose into the pistol so that the whole system is cooled by shielding gas. As all work control is on the pistol, the operator can work at any distance from the cabinet. This feature and the weight of the pistol (2 kg) make the device particularly handy for assembling work. It enables welding seams of any outline, in bottom or ceiling position, and eliminates the disadvantages of the semi-automatic "ПДША-500" welders, produced up to now. These disadvantages are partly

Card 1/2

AKULOV, A.I.; PAL'CHUK, N.Yu.

Possibility of using commercial argon in welding stainless steel with a consumable electrode. Avtom. svar. 10 no.2:50-56 Mr-Ap '57. (MLRA 10:6)

1. Moskovskoye Vyssheye tekhnicheskoye uchilishche im. Baumana.
(Steel, Stainless--Welding) (Protective atmospheres)

3-58-3-24/32

AUTHOR: Akulov, A.I., Candidate of Technical Sciences

TITLE: This Was Done at a Vuz (Eto sdelano v vuze) Welding Tractor TS-3 (Svarochnyy traktor TS -3)

PERIODICAL: Vestnik Vysshey Shkoly, 1958, Nr 3, page 82 (USSR)

ABSTRACT: The welding tractor TC-3 was designed in the laboratory of the Moscow Higher Technical School imeni Bauman. It is intended for arc welding by fusing electrodes by shielded gasses. Butt and angular seams can be welded with this tractor in a lower and overhand position, and horizontal seams in a vertical position. The welding is carried out by electrodes of 0.8 - 2.0 mm in diameter. Argon is used when welding high-alloy acid-resisting steels, and carbon dioxide for low-carbon steels. The tractor consists of a shifting mechanism, electrode feed mechanism, adjustment mechanism and a welding device. Welding can be done at a speed of 18 - 120 m/hour and the electrode feeding speed is 300 - 1,000 m/hour. The weight of the tractor is 21.5 kg. There is 1 photo.

Card 1/2

This Was Done at a Vuz. Welding Tractor TC-3 3-58-3-24/32

ASSOCIATION: Moskovskoye vyssheye tekhnicheskoye uchilishche imeni Baumana (Moscow Higher Technical School imeni Bauman)

AVAILABLE: Library of Congress

Card 2/2

AKULOV, A.I., kand.tekhn.nauk.

Pipe welding in a carbon dioxide medium. Stroi. pred. neft. prom. 3 no.2:7-13 F '58. (MIRA 11:4)
(Pipe, Steel--Welding)

AKULOV, A.I., kand.tekhn.nauk; BLINOV, A.N., inzh.

Automatic arc welding of pipes in a carbon dioxide medium. Nov. tekh. i pered. op. v stroi. 20 no.6:9-12 Je '58. (MIRA 11:6)
(Pipe, Steel--Welding) (Protective atmospheres)

25(1) SOV/135-59-3-3/24

AUTHORS: Akulov, A.I., Candidate of Technical Sciences, Spitsyn, V.V., Engineer, MVTU, and Krzhechkovskiy, A.K., Engineer, Trest Nr 7

TITLE: The Welding in Carbon Dioxide of the Rotatable Butt Joints of Low-Carbon Steel Pipes (Svarka v uglekislom gaze povorotnykh stykov trub iz malouglerodistoy stali)

PERIODICAL: Svarochnoye proizvodstvo, 1959, Nr 3, pp 6-7 (USSR)

ABSTRACT: The MVTU imeni Bauman developed in 1956 in its welding laboratory a method of automatic arc welding for joining the butt ends of pipes, eliminating the use of flux and hence the necessity to use backing rings, and all the difficulties caused by the flux. The new method consists in using two electrode wires at one time ("split electrode"), held either across the seam to obtain a wide and shallow bead, or in line lengthwise to obtain a narrow but deep bead; permitting welding 6 mm thick wall pipes in one pass. CO_2 is used for shielding gas. The welding head, "TSG-4", developed for the purpose is described in detail and illustrated (Fig. 1), as well as its variation for field conditions (Fig. 2). The method is in use in Bugul'ma, Omsk and Ufa. The SMU-70,

Card 1/2

SOV/135-59-3-3/24

The Welding in Carbon Dioxide of the Rotatable Butt Joints of Low-Carbon Steel Pipes

(Stroitel'no-montazhnoye upravleniye - Building and Assembly Administration) in the city of Bugul'ma used the method of constructing more than 10 km of pipeline under field conditions; the SMU-71, Omsk, and the SMU-9, Ufa, are using it with good results. There are 3 photographs.

ASSOCIATIONS: MVTU imeni Bauman and Trust Nr 7 of Glavneftemontazh

Card 2/2

25(0) SOV/135-59-3-22/24

AUTHOR: Akulov, A.I., Candidate of Technical Sciences

TITLE: On the Book by N.M. Novozhilov and V.N. Suslov "Welding with a Fusing Electrode in Carbon Dioxide" (O knige N.M. Novozhilova i V.N. Suslova "Svarka plavyashchimsya elektrodom v uglekislom gaze) (Mashgiz, 1958 g.)

PERIODICAL: Svarochnoye proizvodstvo, 1959, Nr 3, pp 43-44 (USSR)

ABSTRACT: This is a review of the afore mentioned book.

Card 1/1

PHASE I BOOK EXPLOITATION . SOV/4810

Nikolayev, G. A., A. I. Akulov, O. N. Bratkova, G. B. Yevseyev, N. L. Kaganov, A. V. Mordvintseva, and S. T. Nazarov

Svarka (Welding) Moscow, Mashgiz, 1960. 106 p. (Series: Sovetskoye mashinostroyeniye v. 1959-1965 gg.) 4,000 copies printed.

Ed. of Series: I. I. Changli; Managing Ed. for Literature on Heavy Machine Building: S. Ya. Golovin, Engineer; Ed. of Publishing House: G. N. Soboleva; Tech. Ed.: G. V. Smirnova.

PURPOSE: This booklet is intended for technical personnel in plants, Councils of the National Economy, and project bureaus, and may also be useful to students who intend to work in these fields.

COVERAGE: The authors discuss the development of welding methods in machine building and civil engineering. The following are considered: automatic arc welding, electroslag welding, automatic resistance welding, gas-flame processing, automatic surfacing of metals, inspection of welded joints, and modern methods of joining metallic and nonmetallic materials. No personalities are mentioned. There are no references.

Card 1/2

S/125/60/000/06/01/007

AUTHORS: Akulov, A.I., and Spitsyn, V.V.

TITLE: Inoreasing the Resistance of Stainless Welds Against Intercrystalline Corrosion by Faster Cooling

PERIODICAL: Avtomaticheskaya svarka, 1960, No. 6, pp 12 - 18

TEXT: The tendency for intercrystalline corrosion in 18-8 type steel depends on the temperature at which chromium carbides are forming and chromium is diffusing, and on the duration of such temperature. The critical interval is 450-850°C. The use of copper lining to speed the cooling is not always effective and not always possible. The use of water for this purpose was previously described in a Polish [Ref. 3] and an English source [Ref. 4] . The article gives detailed information on experiments at MVTU im.Baumana (MVTU imeni Bauman), in which it was found that water fed onto hot or molten metal in the argon arc welding process did not affect the mechanical properties of welds, but raised the resistance of multilayer welds (insufficiently stabilized by titanium) against intercrystalline corrosion. The materials used in the experiments were: X18H12M2T (Kh18N12M2T) steel for parent metal with "Cb-X18H11M (Sv-Kh18N11M) steel for welding rods, and 1X18H9T (1Kh18N9T) with welding rods of same steel type with T and without. The

Card 1/2

82807
S/125/60/000/007/004/010
A161/A029

18.7200

AUTHORS: Akulov, A.I.; Spitsyn, V.V.

TITLE: The Effect of Cooling Rate on the Resistance of Stainless Welds to Knife-Line and General Corrosion

PERIODICAL: Avtomaticheskaya svarka, 1960, No. 7, pp. 43 - 48

TEXT: The effect of forced cooling by water described previously by the authors (Ref. 5) was studied at the welding laboratory of the MVTU im Baumana (MVTU imeni Bauman) in automatic arc welding in argon with fusing electrode. The article contains details of experiments. The parent metal experimented with was stainless X18H12M2T (Kh18N12M2T) steel containing (%): 0.10 C, 0.57 Si, 0.89 Mn, 17.36 Cr, 12.96 Ni, 0.50 Cu, 0.43 Ti, 2.88 Mo, 0.037 P and 0.022 S. It was found that in welding without forced cooling the spot 1.0 - 1.5 mm from the boundary between the parent and the weld metal remains longest in the critical temperature interval, and knife-line corrosion is to be expected in this spot. The conclusion was drawn that speeded-up cooling by water jet reduced the development of knife-line corrosion in "Kh18N12M2T" steel, but had practically no effect on the general corrosion of welded joints of 1X18H9T (1Kh18N9T) steel. An edito-

Card 1/2

82807

S/125/60/000/007/004/010
A161/A029

The Effect of Cooling Rate on the Resistance of Stainless Welds to Knife-Line and General Corrosion

rial note (p. 44) concerning the spot of the longest effect of critical temperature points out that the spot of knife-line corrosion is determined not by the duration of the critical 450 - 850°C temperature effect in the spot only, but also by the duration of preceding heating at a temperature causing dissolution of titanium or niobium carbides. There are 8 figures and 6 references: 4 Soviet and 2 English.

ASSOCIATION: MVTU im. Baumana (MVTU imeni Bauman)

SUBMITTED: December 25, 1959

Card 2/2

AKULOV, A.I., kand.tekhn.nauk; SPITSYN, V.V., inzh.

Pipe welding in carbon dioxide with transverse weaving of the electrode. Svar.proizv. no.9:35-37 S '60. (MIRA 13:8)

1. Moskovskoye vysshoye tekhnicheskoye uchilishche im.Baumana.
(Electric welding)
(Protective atmospheres)

84636

18.7200 1506, 2308 only

S/135/60/000/011/013/016
A006/A001

AUTHORS: Akulov, A.I., Candidate of Technical Sciences, Spitsyn, V.V., Sokol, I.A., Engineers

TITLE: The Use of Nitrogen-Hydrogen Mixture for Backing the Reverse Side of Welds

PERIODICAL: Svarochnoye proizvodstvo, 1960, No. 11, pp. 38-39

TEXT: When welding important stainless steel pipelines the internal space of the pipes is filled with argon to back and improve the formation of the reverse side of welds. The "Soyuzprommontazh" Trust at the Stalinogorsk Chemical Combine replaced the expensive argon by a cheaper nitrogen-hydrogen mixture. To select an optimum backing gas medium, the MVTU imeni Bauman welding laboratory together with "Soyuzprommontazh" investigated the effect of various gases and mixtures on mechanical and corrosion properties of weld joints. Welding tests were made with 200 x 4 and 89 x 3 mm diameter V4A steel pipes and with 76 x 5 mm diameter 1X18H9T (1Kh18N9T) steel pipes using the following backing gases: argon of first composition; nitrogen with 2% oxygen; a mixture of 86% nitrogen and 14% hydrogen; a mixture of 93% nitrogen and 7% hydrogen. In the two latter

Card 1/2

AKULOV, A.I., kand.tekhn.nauk; SPITSYN, V.V., inzh.; SOKOL, I.A., inzh.

Argon-arch welding of alloy steel pipes using hydrogen nitrate protecting and molding mixes. Mont.i spets.rab.v stroi. 22 no.9:8-12 S '60. (MIRA 13:8)

1. Moskovskoye vysshoye tekhnicheskoye uchilishche imeni Baumana i trest Soyuzprommontazh.
(Pipe, Steel--Welding)

AKULOV, A.I., kand. tekhn. nauk; KUZNETSOVA, M.I., red.; VIKTOROVA, Z.N., tekhn. red.

"Arc welding in a protective atmosphere] Dugovaia svarka v srede zashchitnykh gazov. Moskva, TSentr. in-t nauchno-tekhn. informatsii mashinostroeniia, 1961. 108 p. (MIRA 14:10)
(Electric welding) (Protective atmospheres)

AKULOV, A.I.; YEVSEYEV, G.B.; KAGANOV, N.L.; KURKIN, S.A.; LYUBAVSKIY, K.V.; MORDVINTSEVA, A.V.; NAZAROV, S.T.; NIKOLAYEV, G.A., doktor tekhn.nauk, prof., zasluzhennyy deyatel' nauki i tekhniki; OL'SHANSKIY, N.A.; CHANGLI, I.I., red.; STEPANCHENKO, N.S., red. izd-va; EL'KIND, V.D., tekhn.red.

[Current welding practices] Sovremennoe sostoianie svarochnoi tekhniki. Sovmestnoe izdanie Mashgiz, SNTL, 1961. 318 p. (MIRA 14:6)

(Welding)

S/118/61/000/002/007/007
A161/A126

AUTHOR: Akulov, A.I., Candidate of Technical Sciences

TITLE: Automation in the welding industry

PERIODICAL: Mekhanizatsiya i avtomatizatsiya proizvodstva, no. 2, 1961, 57-60

TEXT: Information is presented on an All-Union conference convened in November 1960 at Institut elektrosvarki im. Ye.O. Patona AN USSR (Electric Welding Institute im. Ye.O. Paton AS UkrSSR) and organized by the Gosudarstvennyy nauchno-tekhnicheskiy komitet Soveta Ministrov SSSR (Scientific-Technical State Committee, Ministers Council of the USSR), Gosudarstvennyy komitet Soveta Ministrov SSSR po avtomatizatsii i mashinostroyeniyu (State Committee for Automation and Machinery, Ministers Council of the USSR), Gosudarstvennyy nauchno-tekhnicheskiy komitet Soveta Ministrov Ukrainskoy SSR (Scientific-Technical State Committee, Ministers Council of the Ukrainskaya SSR), the Electric Welding Institute im. Ye.O. Paton, and Tsentral'noye i Kiyevskoye oblastnoye pravleniye NTO Mashproma (The Central and the Kiyev Oblast' Board of NTO Mashprom). A.V. Topchiyev, Deputy Chairman of the State Committee for Automation and Machinery, Ministers Council of the USSR, opened the conference with a speech outlining the

Card 1/4

Automation in the welding industry

general mechanization tasks in the USSR industry and emphasizing the importance of welding in general development. He mentioned "model" ("pokazatel'nyye") welding plants that have to become schools of advanced techniques in welding. Academician B.Ye. Paton, Director of the Electric Welding Institute AS UkrSSR, spoke of the welding development in the USSR. A.N. Shashkov, Candidate of Technical Sciences, Director of VNIIAVTOGEN, spoke about the development of gas torch cutting. P.I. Sevbo, Candidate of Technical Sciences (Electric Welding Institute im. Paton) pointed out in his report a general switch-over from mechanization of single operations to mechanization and automation of the entire assembly-welding process, and the importance of standardization of the fundamental elements of the new welding equipment. M.I. Baranov, Engineer (Moscow), mentioned that automatic and machine welding are mainly used in mass and large-lot production, and that in small-lot and piece output automation will only be possible with standardized and cheap welding equipment. L.A. Zhivotinskiy, Engineer, (VPTI TYaZhMASh, Moscow) discussed the same problem. V.S. Volodin, Engineer, (State Committee for Automation and Machinery) stressed the importance of standardized technological processes and the insufficiently developed theory for such standardization. N.O. Okerblom, Doctor of Technical Sciences (Leningrad Polytechnic Institute) reported on the problem of workpiece designs that must be

Automation in the welding industry

developed with a view to new technology. N.Ya. Kochanovskiy, Candidate of Technical Sciences, (VNIIESO), reported on multielectrode resistance welding and new machines produced in joint work of VNIIESO and the "Elektrik" plant for automatic welding assembly lines that will be used in the production of automobiles, Diesel locomotives, etc. A joint report of R.I. Lashkevich and S.L. Mandel'berg, Candidates of Technical Sciences, concerned automatic welding of pipes for main pipelines and mentioned pipe welding at the electric pipe-welding shop of the Chelyabinsk pipe rolling plant. One preparation line in this shop has been automated and its productivity nearly doubled. Automatic submerged-arc welding is now possible with up to 140 m/hr speed, but one preparation line has to serve 5-6 welding lines, and the possible maximum welding speed can not be used for this reason. M.V. Orlov, Engineer (Leningrad) reported on welding mechanization in docks and stated that ship sections will be semi-assembled in shops with the use of modern and automated processes. A co-report by Yu.V. Rayevskiy, B.F. Lebedev, Candidates of Technical Sciences, and V.A. Beletskiy, Engineer, dealt with a method of temporary folding of sheet structures, which permits to carry out most of the welding in plant shops. S.I. Rusakov, Engineer (of the Gor'kiy Automobile Plant) informed on nearly fully mechanized welding production at the plant (94.5%). V.D. Kolesnikov, Engineer, informed on welding mechanization at the Luganskiy

teplovozostroitel'nyy zavod im. Oktyabr'skoy revolyutsii (The Lugansk Diesel Locomotive Plant im. October Revolution) where a special designing office for mechanization and automation of production has been organized and special plots are producing equipment for mechanization. D.P. Lebed', Candidate of Technical Sciences, and Ogara, Engineer, described a welding line at the Zavod metallokonstruktsiy im. Babushkina (Metal Framework Plant im. Babushkin) in Dnepropetrovsk. N.D. Portnoy, Candidate of Technical Sciences, told of flow-line production of heavy RR cars at Uralvagonzavod and mentioned multi-electrode resistance welding used in flow lines. D.P. Antonets, Engineer, described flow-line production of RR tank cars of 60 m^3 capacity at the Zhdanovskiy zavod tyazhelogo mashinostroyeniya (Zhdanov Heavy Machinery Plant). N.M. Novozhilov, Candidate of Technical Sciences, reported on development of gas-shielded welding, and I.I. Frumin, Doctor of Technical Sciences, and I.K. Pokhodnya, Candidate of Technical Sciences, on open-arc welding with powder wire. The conference decided to bring the following facts to the attention of the Gosplan USSR, the Scientific-Technical State Committees and other organizations: The switch-over to complex mechanization of welding is too slow, because equipment and materials are lacking. Designers of welded structures do not sufficiently consider mechanized and automated processes. The number of skilled specialists in industry is too small.

1.2300 1573

~~25955~~ 26018
S/135/61/000/008/008/011
A006/A101

AUTHORS: Akulov, A.I., Candidate of Technical Sciences, Isachenko, V.K.

TITLE: A system for the automatic control of penetration during arc welding

PERIODICAL: Svarochnoye proizvodstvo, no. 8, 1961, 23 - 25

TEXT: At the welding laboratory of MVTU imeni Bauman a system was developed for the automatic control of the amplitude of electrode transverse oscillations which regulate the penetrating effect of the arc. For this purpose a special crystal photoelectric diode pickup is placed underneath the butt to be welded. A block-diagram of the system is given (Fig. 2). The voltage from the amplifier lead-out is received by a regulating device which moves the link gear slider (indicated by arrows 1) thus changing the transverse oscillations of the electrode tip. The oscillations are transmitted to the link gear from the welding wire feed reductor (arrows 2). Simultaneously the sliders move towards the clamping device which switches off the drive of the regulating mechanism when the amplitude of electrode oscillations corresponds with the penetration required of the butt. If signals are not transmitted by the pick-up, then the link gear slider

Card 1/3

A system for the automatic control ...

is in the extremal upper position. When signals transmitted are most intensive, then the amplitude of electrode oscillations is the highest and the slider is in its lowest position. The information includes a description of the schematic diagram of the system, which may also be used for semi-automatic operation, and of a device for placing the pick-up in straight or bent pipes. The use of the new system produces satisfactory formation of the weld root by changing the butt gap within 0 - 3 mm. It can also be employed for welding circumferential joints on cylindrical work, sheet structures etc. There are 7 figures and 1 Soviet-bloc reference.

ASSOCIATION: MVTU imeni Bauman

Card 2/3

18 8300 1573, 1413, 2808, 2208

26478
S/125/61/000/009/001/014
D040/D113

AUTHOR: Akulov, A.I.

TITLE: The effect of nitrogen on the corrosion resistance of welds in 18-8 type steels

PERIODICAL: Avtomaticheskaya svarka, no. 9, 1961, 3-5

TEXT: The article gives a brief information on experiments undertaken to complement the available data on the effect of nitrogen on the corrosion resistance of welds in 18-8 type steels. Steel tubes 89 and 200 mm in diameter and with 3 and 4 mm wall thickness were butt welded in experiments, by a manual arc welding method using a tungsten electrode and filler wire. Nitrogen or argon was blown for shielding. The chemical composition of the tube steel was as follows: (Table 1):

Tube, mm (%)	C	Si	Mn	Cr	Ni	N	Ti	Mo
89 x 3	0.07	0.46	1.05	17.83	10.9	0.04	0.4	2.2
200 x 4	0.07	0.47	1.13	16.69	11.12	0.56	0.018	2.30

Card 1/2

The effect of nitrogen ....

Reduced ferrite content and refined metal structure were stated in weld metal produced in nitrogen, which confirms the data obtained by R.V.Anderson (Ref.3: The Value of Nitrogen as a Weld Backing Gas, "Welding Journal", no.2, 1958). Ferrite quantity determinations revealed that even a simple remelting of the base metal in both argon and nitrogen leads to the appearance of ferrite on the grain boundaries. Annealing for 2 hours at 650°C transformed δ -ferrite into austenite and reduced the ferrite content in the weld metal. Corrosion test results showed that weld metal resistance to intercrystalline corrosion (in natural state as well as after "provocative" annealing for 2 hours at 650°C) was lower after welding in nitrogen than after welding in argon. On the other hand the resistance of welds to general corrosion was higher after welding in nitrogen than in argon. There are 3 figures, 2 tables and 3 references: 2 Soviet and one non-Soviet bloc. The reference to the English-language publication reads as follows: R.V.Anderson, The Value of Nitrogen as a Weld Backing Gas, "Welding Journal", No.2, 1958.

ASSOCIATION: MVTU im. Baumana (MVTU im. Bauman)

SUBMITTED: February 20, 1961

Card 2/2

18.8300

30228
S/125/61/000/011/005/012
D040/D113

AUTHOR: Akulov, A.I.

TITLE: Shearing corrosion in welded joints in 18-8 type steel

PERIODICAL: Avtomaticheskaya svarka, no. 11, 1961, 35-39

TEXT: The results are presented of an experimental study in which the relation between the "shearing" corrosion phenomenon and the tendency to intercrystalline corrosion is determined. The author refers to several Soviet and foreign investigations in this connection, including research conducted by K.V. Lyubavskiy and M.A. Studnits (Ref.7: "Svarochnoye proizvodstvo", no. 4, 1959) who did not reveal carbon redistribution in the boundary between the weld and the base metal. For experimental purposes, the base metal used, was German V-4A-Extra steel and Soviet 1Х18Н9Т (1Kh18N9T) steel in the form of pipes welded by the argon arc process. Specimens were tested using boiling nitric acid or in accordance with the standard method per ГОСТ 6032-58 (GOST 6032-58); the ferrite content was measured by a magnetic

Card 1/3

Shearing corrosion in ...

method using an alpha-phasemeter of NIIKhIMMASh design. The article includes a table of the composition of pipes and welding wires and of the ferrite content, and photographs of the metal structure. The data show that welds on metal with $\frac{Ti + Nb}{C} \leqslant 4.8$ can develop shearing corrosion, and welds on metal with $\frac{Ti + Nb}{C} = 6.6$ do not, if not subjected to provocative tempering at 650°C. This relationship must be more than 8 to prevent shearing corrosion after such tempering. Alloying with Mo promoted shearing corrosion. It developed mainly as a result of intercrystalline corrosion of the base metal at the fusion line; however, the adjacent weld metal was also affected. It is supposed that C, Mo, Si and other elements producing ferrite, diffuse along the grain boundaries under the effect of heat, and that the increasing concentration of Si and Mo on the austenite grain boundaries results in lowered content of Cr, Ti, Nb, and other elements, which in turn can lead to the formation of a certain quantity of iron carbides which are not corrosion-proof. The following conclusions are drawn: (1) Shearing corrosion may be the result of concentrated intercrystalline corrosion in the base and weld metal at the fusion line; (2) Shearing corrosion can be prevented if the base metal con-

30228

S/125/61/000/011/005/012
D040/D113

Shearing corrosion in ...

taining Mo is alloyed with strong carbide producers, such as Nb and Ti, added in quantities corresponding to the $\frac{Ti + Nb}{C} > 8.2$ relationship. There are 4 figures, 2 tables and 9 references: 5 Soviet and 4 non-Soviet-bloc. The four references to English-language publications read as follows: H.F. Ebling, M.A. Schneil, Corrosion Data of Welded Low-Carbon Stainless Steel, "Welding Journal", no. 10, 1951; E.I. Heeley and A.T. Little, Corrosion Resistance of Some Austenitic Cr-Ni Steels of 18/8 Ti Composition, "Journal of the Iron and Steel Institute", March, 1956; M.W. Marshall, Corrosion Characteristics of Types 304 and 304 L Weldments, "Welding Journal", no. 6, 1959; E. Houdremont, Corrosion Resistance of Some Austenitic Cr-Ni Steels of 18/8 Ti Composition, "Journal of the Iron and Steel Institute", no. 4, 1954.

ASSOCIATION: MVTU im. Baumana (MVTU im.Bauman)

SUBMITTED: February 20, 1961

Card 3/3

AKULOV, A.I., kand.tekhn.nauk; SPITSYN, V.V., inzh.

Automatic pipe welding in a carbon dioxide medium at a pipe plant. Mont. i spets. rab. v stroi. 23 no.4:14-17 Ap '61. (MIRA 14:5)

1. Moskovskoye vyssheye tekhnicheskoye uchilishche imeni Baumana.
(Pipe--Welding)

27810
S/049/61/000/101/008/015
D256/D304

1.2300 (1573)

AUTHORS: Akulov, A.I., Candidate of Technical Sciences, Docent and Spitsin, V.V., Engineer

TITLE: A process of reducing welding deformation

PERIODICAL: Vysshaye tekhnicheskoye uchilishche. Trudy. Svarka tsvetnykh splavov, redkikh metallov i plastmass, no. 101, 1961, 175 - 185

TEXT: The authors endeavor to reduce the distortion in welded fabrications, particularly of light gage metal. The method consists of forced water-cooling of the heat-affected zone to 100-150°C, reducing the residual strains. The aim of the present investigation is to assess the effectiveness of the method and investigate joint properties. Two ferrous materials were used - a heat-resisting steel, welded by the argon-shielded consumable electrode process, and a mild steel, welded in CO_2. Apart from normal air-cooling (A) a jet of water at 70 l/hour was directed either onto the weld pool (P) or onto the hot weld metal at about 1100-1200°C (H). Welding

Card 1/

A process of reducing welding ...

was carried out at 10-15° uphill so that the water ran off. Heat resisting steel 1X18H9T (1Kh18N9T) is then examined. A bead was deposited on 5 mm thick plates. Welding conditions 240-250 A (reverse polarity d.c.), 28 arc volts, speed 18.8 m/hr., 1.0 mm Sv-0Kh18N9 wire, argon shielding. The plates were not pre-bent, and were unrestrained during bead deposition, and the results are shown in Fig. 3. The deformation was reduced by 57 %, and the residual st[illegible]s by 37 %. Bending distortion along and transverse to the weld was also considered, the former being assessed on a 160 mm base, and the latter across the plate at three sections. Water cooling apparently reversed the direction of longitudinal bending (Fig. 4a) suggesting that at the right cooling rate no distortion will occur. Mechanical and corrosion-resistance properties of welded joints and weld metal were found to be unaffected by water cooling, except that in multi-layer welds corrosion resistance (intercrystalline) was improved. Gas content was also unaffected. As regards mil[illegible] steel a similar procedure was followed, 2.5 mm thick, 150 x 300 mm, steel 3 plates being used. A longitudinal bead was deposited using the CO_2-shielded process, with 1 mm diameter Sv-10GS wire, 160 A,

Card 2/[illegible]

A process of reducing welding ...

28 arc volts, and 36 m/hr. welding speed. In this case the welding strains were reduced by 70 % and the residual longitudinal stresses by 18 %. Hardness testing shows a slightly higher general hardness level in the water-cooled specimens and elimination of the recrystallized zone in the parent metal. Properties of welded joints and weld metal made with water cooling onto the pool are satisfactory, but no comparative data are given. It was concluded generally that this method of reducing welding stresses and strains is effective and unaccompanied by any sacrifice in weld or joint properties. There are 8 figures and 6 tables.

Card 3/4

1.2300

27816
S/549/61/000/101/014/015
D256/D304

AUTHORS: Akulov, A.I., Candidate of Technical Sciences, Docent, and Spitsyn, V.V., Engineer

TITLE: The influence of argon and 18/8-type wire composition on weld metal properties

PERIODICAL: Vyssheye tekhnicheskoye uchilishche. Trudy. Svarka tsvetnykh splavov, redkikh metallov i plastmass, no. 101, 1961, 236 - 240

TEXT: Two grades of argon and two wire compositions were used to make welds by the sigma process. The pure, grade 2 argon contained 0.3 % N_2 and 0.05 % O_2, and technical argon (widely used because of its cheapness) 10 % N_2, 0.5 % O_2 and 0.4 % CO_2. 1 mm diameter wires of the following compositions were used. (Table 1). Except for the nitrogen content, the composition of the deposited metal shows little dependence on argon purity. Technical argon gave 0.26% nitrogen and pure argon, 0.16 - 0.18 % with SV-1Kh18N9T. In either gas SV-0kh18N9 and SV1Kh18N9T wires gave 0.17 and 0.44 % titanium,

Card 1/4

The influence of argon and ...

heating caused by multi-layer welding on corrosion resistance, welds were also made by a pass each side; welding conditions were the same as before except for increased speed. Both wires were used but only the pure argon. Specimens were boiled [Abstractor's note: In what not mentioned] and bent along the weld, two in each direction. Single-pass welds are not susceptible to intercrystalline corrosion, irrespective of gas or wire. Double-sided welds made with the titanium-containing wire are also insensitive. In some specimens from welds made with the titanium-free wire the first pass is susceptible to corrosion while the second remains satisfactory. The overall conclusions are that the argon purity has little effect on weld mechanical and chemical properties, and that titanium in the welding wire enchances mechanical properties and ensures corrosion resistance in multi-layer welds, but is not essential in single-layer welds. There are 3 tables.

Card 3/4

AKULOV, I.A., kand. tekhn.nauk,dots.; ALEKSEYEV, Ye.K., inzh.; GURARI, M.D., inzh.[deceased]; DMITRIYEV, I.S., kand.tekhn.nauk,dots.; YEVSEYEV, R.Ye., inzh.; ZIL'BERBERG, A.L., inzh.; LIVSHITS, L.S., kand.tekhn.nauk; MEL'NIK, V.I., inzh.; RAZUMOVA, E.D., inzh.; TARAN, V.D., prof., doktor tekhn.nauk; FAL'KEVICH, A.S., kand.tekhn. nauk; TSEGEL'SKIY, V.L., inzh.; CHERNYAK, V.S., inzh.; SHILOVTSEV, D.P., inzh.; ZVEGINTSEVA, K.V., inzh., nauchnyy red.; TYURIN, V.F., inzh.,nauchnyy red.; VOLNYANSKIY,A.K.,glav.red.; SOKOLOV,D.V.,zam. glav.red.; SEREBRENNIKOV,S.S., red.; MIKHAYLOV,K.A.,red.; STAROVEROV, I.G., red.; VOLODIN, V.Ye., red.; NIKOLAYEVSKIY, Ye.Ya.,red.; LYTKINA,L.S.,red.izd-va; PEREVALYUK,M.V.,red. izd-va; RUDAKOVA, N.I., tekhn. red.

[Welding operations in building]Svarochnye raboty v stroitel'stve. Moskva,Gosstroiizdat,1962. 783 p. (MIRA 15:6)
(Welding--Handbooks, manuals, etc.) (Building)